

Planning Aspect of Upazila* Shahar

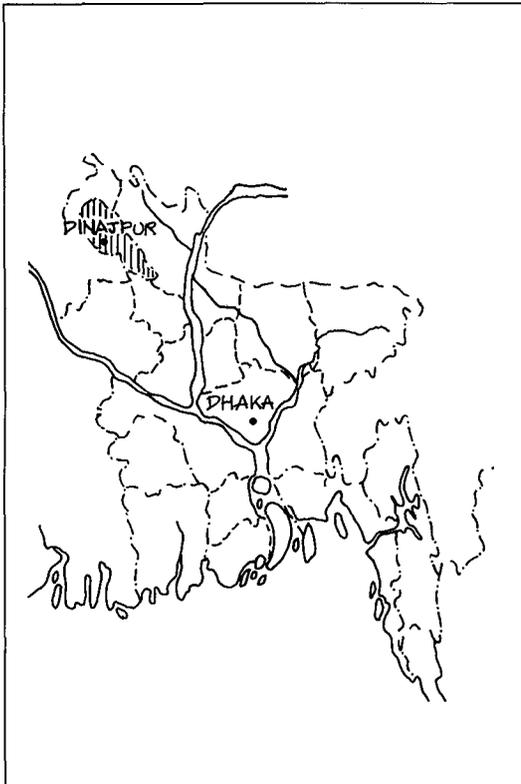
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Introduction

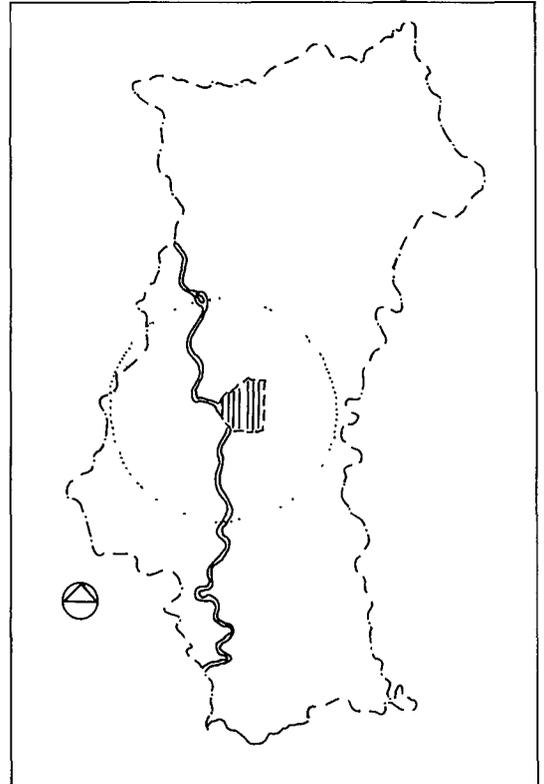
The Bangladesh Government's administrative re-organisation policy resulted in the formation of the Local Government (Thana Parishad and Thana Administration Re-organisation) Ordinance, 1982¹. This Ordinance was later amended, whereby the word "Thana" was substituted by "Upazila". According to this Ordinance, the national government retains the major development activities on a national and regional scale, while other local developments of public institutions, and infrastructures will be performed by the upazila administration. The objective of the Government's policy is

- to reduce dependence of the rural people on the national government for meeting those needs which can be met locally and to develop self reliance in the process
- to mobilise and utilise local resources which have until now remained under utilised.
- to reduce the direct involvement of the national government in planning and implementation of projects which are purely local in nature².

* Upazila means sub-district



Bangladesh map showing location of Dinajpur District



Chirirbandar Upazila showing catchment area.

With these objectives, the government decided to reorganise the administration at the upazila level thus making the upazila the most significant tier of administration. The upazila centre would plan and develop all social, economic, administrative and infrastructural services for the upazila region.

As such, administration in the upazila town was a critical point in a well articulated system for linking urban and rural functions, and providing facilities for administrative, judicial, economic, social and infrastructural services. The town would therefore provide the locations for residential, administrative, judiciary, cottage and small scale industries, education, health, social and utilities services, commercial, cultural and recreational facilities.

In these circumstances, it was felt that the upazila centre should grow up expeditiously and the preparation of a landuse plan/masterplan for such centres was and is of the utmost importance for better utilisation of the region's land, people and natural resources. With this end in view, the government planned the preparation of the landuse plans and masterplans for some of the upazila headquarters of Bangladesh, which would be called the upazila shahar (towns).

The subject of this paper "Planning Aspects of the Upazila Shahar" describes the criteria of designing such upazila shahar and presents Chirirbandar Upazila in Dinajpur district as a case study.

Objectives

The objectives of the preparation of a landuse plan and masterplan of the upazila headquarters were

- To serve as locational and spatial guidelines indicating places of work, residence and recreation.
- To facilitate public and private development at the upazila centre through physical planning
- To serve as a technical backup for planned growth of human settlements in the country specially at the upazila level, so that a significant segment of rural migrants to cities are induced to work and live there.
- To prepare a detailed landuse plan of the upazila headquarters that will help in the formulation of spatial and design standards and to illustrate the methodology of designing the planned centre.

Scope of the Masterplan

The masterplan covers all the major aspects related to the landuse of the upazila headquarters Particular attention is paid to the following:

- Delineation of the masterplan area based on future potential development, expansion capacity and

other ancillary local factors and conditions in and around the centre.

- Detailed existing landuse survey encompassing, among other things, existing built-up area, topographical and flood characteristics of the area, existing drainage channels, alternative plans for development of drainage and determining the location for flood protection schemes.
 - Determination of the hierarchy of settlement within the upazila based on population, economic activity, social infrastructure provision, transport links and related characteristics. The range of service concentration within the upazila determines the hierarchy of settlements. The range of services will include the markets, banks, hospitals, schools, post offices and any other urban services. The revenue income from markets, electricity and transport, for example plays an important role in determination of the hierarchy.
 - Identification of the upazila headquarter's socio-economic sphere of influence or catchment area, considering the attractiveness of other centres The catchment area is the basis of population forecasting and determining the extent of social services and other landuses that will be provided in the upazila headquarters.
 - Forecasts of population and employment based on past trends, with allowance for the induced attraction of the government's upgrading commitment, to 1985, 1990 and indicative, to the year 2000. Forecasts include High, Medium and Low projections and urban landuse requirements and plans are based on the Medium projections.
 - Preparation of landuse zoning plans for the upazila headquarters, which identify suitably locations for residential, social, administrative, economic and circulatory uses.
 - Accommodation of major investments and activities of the various development agencies and ministries. The plan indicates the stages of development through a 5-year programme of the Government.
- The plan indicates an outline framework and strategy for management and development control and institutional arrangements for effective implementation.

Detailed methodology

A methodology evolved from the requirement to prepare landuse plans of the future upazila headquarters. It was addressed principally at the following aspects:

Determination of the hierarchy of settlements: Settlement hierarchy is related to the landuse planning purposes in so far as distribution of future urban population in the upazila subregion is concerned. The

hierarchy of various types of settlement was identified on the basis of:

- Population concentration over time (in the last few decades).
- Status of the settlements in terms of various services being rendered.
- Transportation links with settlements immediately above and below in the level of hierarchy.

Physical Survey of Existing Landuse Patterns: The physical survey had two components: Firstly a landuse survey of the study area. Secondly an engineering survey of about 200 acres of the central zone around the existing built-up area. The emphasis of the survey was on: (i) assessment of the availability of high land, (ii) flood characteristics of the area, (iii) river erosion problem, if any, (iv) availability of open land for future expansion of the upazila centre, and (v) existing physical infrastructure. Topographic maps along with settlement maps were used in the study.

Socio-economic Survey: Survey teams with a comprehensive questionnaire were sent to the study area to conduct a survey to determine the socio-economic parameters related to landuse evaluation. The survey, along with data from secondary sources, was the basis for the formulation of the population growth scenarios as well as the size and the details of the masterplan area.

Interview of Public Agencies: The purpose of the interviews was to note the programmes of various development agencies, such as the Water Development Board, Power Development Board, Agricultural Development Corporation, Roads & Highways Department, PWD, Social Welfare Department, Shilpa Bank, the UNO (Upazila Nirbahi Officer) office, and other concerned departments.

Review of Documents and Publications: A review of documents and publications on demographic and socio-economic data was done to supplement the field surveys and interviews.

Data Base: A large amount of data was utilised in the course of the preparation of the masterplan. Some of the data was obtained from available reports and from various public agencies. A substantial amount of data were also generated through the surveys. The data base was used in the forecasting exercise.

Forecasting: A quantitative estimate of future population size and composition, income level, industrial and commercial activities in the upazila centre and its surroundings was crucial to the formulation of the masterplan.

Three socio-economic aspects, agriculture, industries and population were the focal point of the exercise. Both agriculture and industries were the primary

determinants of income, living standard, employment and urbanisation. The projected growth of industries also influenced landuse allocation in the masterplan, while the projected population size, more than anything else, determined the size of the upazila shahar, requirement of space for housing, parks, markets, hospitals, as well as demand for electricity, water supply and other services.

Planning provision standards³

In order that plans for upazila headquarters are prepared on a uniform basis the following guidelines on landuse provision standards have been formulated by the Urban Development Directorate, Ministry of Works.

The standards are based on the total amount of land required for selected urban purposes, expressed as acres per population threshold, served by the upazila headquarters; this involves:

- Identifying the total population to be served by the socio-economic facilities proposed for the upazila headquarters by 1990. This serviced population will usually extend beyond the boundary of the headquarters area itself.
- Incorporating existing urban landuses into the totals forecast to be required by 1990, and identifying areas which are unsuitable for urban development.
- Including an allowance of 10% as "urban deferred" i.e. land reserved for urban services that will be required either to service a population which turns out to be larger than that forecast and/or to accommodate the needs of a growing population in the 1990's.

Overall Proportions:

In general terms the proposed urbanised (including existing urban landuse) part of the upazila headquarters area will be subdivided into the following broad categories of landuse.

Commerce and Industry	10-15%
Social, Administrative, Cultural and Urban Services	20-30%
Roads (including local)	5-10%
Residential	35-45%
Urban deferred	about 10%
Reserves	about 5%
	100%

Specific Provision Standards: All provision standards except residential will relate to the whole catchment area of the upazila headquarters. Residential landuse allocations will be for the headquarters population only.

a) Commerce and Industry:

Market	Total area of 1.5 acres per 1,000 served
Shop	
Office	
Small Scale Industry	

b) Social, Administrative, Cultural and Urban Services:

Education	nursery school	Total area of 2 acres per 5,000 population served
	primary school	
	secondary school	5 acres per 20,000 population served
	or college	

Health	dispensary	Total area of 1 acre per 5,000 population served.
	maternity/child care	
	health care	Total area of 5 acres per 20,000 population served
	hospital	

Administration/Judiciary (including officers residences)	12 acres per upazila headquarters
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Recreation	parks, open space	1 acre per 1,000 population served.
	cinema, closed space	0.5 acre per 20,000 population served
	sports stadium	3 acres per 20,000 population served

Socio-cultural	community centre	1 acre per 20,000 population served
	religious facility	0.5 acre per 5,000 population served.
	cemetery	5 acres per 20,000 population served

Urban Services	post office	0.5 acre per 20,000 population served
	telephone exchange	0.5 acre per 20,000 population served
	police station	2 acres per 20,000 population served
	bus/ghat/railstation	1 acre per 20,000 population served
	others	1 acre per 20,000 population served

c) Roads:	Reserve	Surface
Major	60'-0"	30'-0"
Secondary	40'-0"	20'-0"
Local	24'-0"	12'-0"

d) Residential:

An average of 100 persons per acre net of roads and other facilities will be provided. Local access road system will be included, and will be sufficient to provide access to all plots (applies to headquarters population only)

e) Reserves:

Identification of areas within the built up area which will not be used for further development purposes, for example, ponds, land of agricultural importance, land liable to flooding, government reserves

The Master Plan

The masterplan is primarily a landuse plan. The basic objective of the planning exercise will be to determine the boundary of the area that will eventually grow into a functional town, so that legal and administrative measures can be taken now in order to facilitate the growth in an orderly manner.

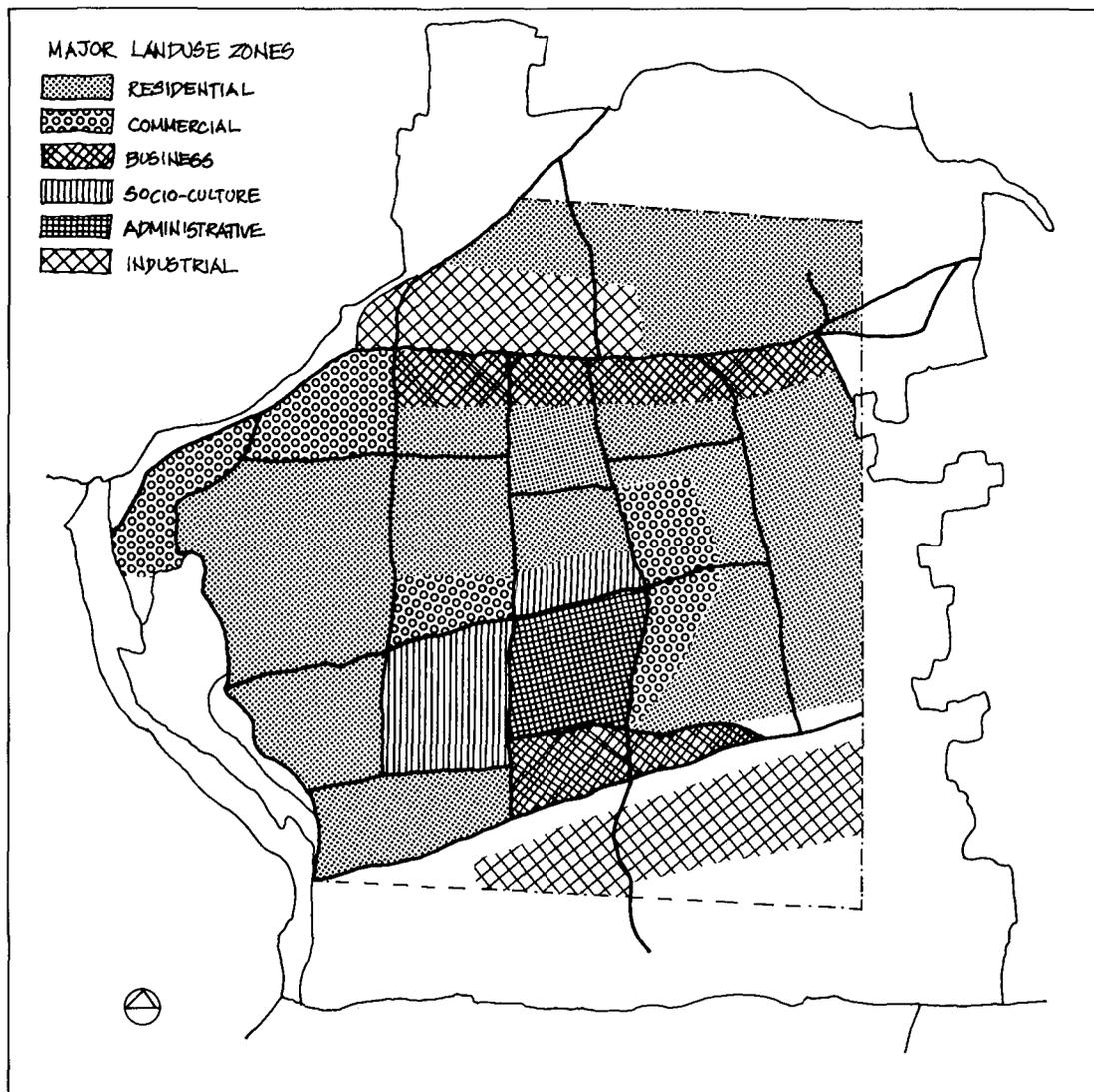
The local conditions in terms of physical conditions imposed by normal land features and conservation of residential and urban functions, and inter-upazila transportation network will be considered in making the landuse plan.

Another consideration will be to identify urban communities, which will be integrated into the urban structure in order to ensure maximum utilisation of land and to create conditions for recapturing the

potentialities of land as an important urban economic resource. The approach will also induce private owners of land to use their land lots for effective and profitable purposes other than agriculture. This will help public authorities to avoid acquisition of private lands in the proposed planning area.

The Upazila will serve not only as the administrative headquarter but also as the economic and cultural centre of the surrounding area. The masterplan will have to provide for these developments and space will be allocated to the following functions:

- a) administrative and judicial (upazila complex)
- b) commerce
- c) industries including small and cottage type industry
- d) hospitals and other health services including upazila health complex



Major landuse zones of the proposed master plan of Chiribandar Upazila Shahar.

- e) education
- f) culture and recreation
- g) transportation, including stations
- h) religious and social welfare services
- i) electricity water and other utilities
- j) housing.

The first task will be to determine the total space required for each function. The population and other projections as well as the Guideline on Planning Provision Standard, prepared by the Urban Development Directorate, Ministry of Works will be the basic input to this analysis. The upazila shahar will centre around the upazila complex. An area of twelve acres has been allotted to each upazila complex in the country. The plan must be pragmatic therefore, assumptions as regards type of housing, mode of transport within the town, spatial requirement and uses will be based on existing norms in the country.

The total size of the masterplan area will depend on the population and other socio-economic projections. The boundary will be delineated on the basis of landuse survey, in order to minimise land development cost. The criterion of land suitability will decide as to what extent radial growth can be planned. The next major step is the zoning of the land. Distribution of the population and economic activities need to be spread evenly to avoid unbalanced transportation and other infrastructure.

The masterplan of the upazila will be implemented in phases of 5 years commensurate with a 5 year plan of the Government. Development control of the masterplan will be enforced through:

- a) Preparation of detail plans with zoning proposal for all areas proposed for development.
- b) Legal and institutional measures for enforcing control over all public sector developments in the planning area.

The upazila parishad as the local authority will monitor project implementation. All sectoral activities will be performed on the basis of the masterplan.

Case Study: Chirirbandar upazila⁴

Chirirbandar in Dinajpur district is one of the 460 upazilas of Bangladesh. The total population of this upazila is 1.84 lakh* (1981) and the population growth rate is 2.80 (1981). The total area of the upazila is 120 square miles (311 square kilometres) which holds 145 villages.

Located at the north eastern corner of the country, Chirirbandar is well connected by roads and railways partly because of its surplus food production and also because of the location of Parbatipur, an important railway function

Chirirbandar upazila headquarter has a strategic location. The river Kankra flows on the western border and the Atrai on the east. The boundaries on the south and north are bordered by the railway line and the regional road respectively. The presence of these existing features delineates the shahar boundary of Chirirbandar upazila which has an area of 840 acres (340 hectares). Growth pattern depicts a linear settlement along the railway road in the south and along the river on the west. However, the location of the newly constructed upazila complex in the central area will act as a catalysing force for developments in the central area.

Survey results show that existing landuse in the upazila include 77.7% of agricultural land and only 7.9% residential, 1.9% administrative and 0.4% commercial land. The projected masterplan proposes the future structure of the upazila shahar estimating the land requirement on the basis of the population projection to the year 1990 and the space standards given by the Urban Development Directorate.

According to the projections the population of Chirirbandar will be 2.78 lakhs in 1990. Urban communities consisting of 5,000 population are integrated into the urban structure in a grid-iron pattern in order to ensure maximum utilisation of land and its potentialities thus forming zoned residential, administrative and the central business districts.

The population projection and the economic performance on the basis of which the plan is drawn up may not hold good in future. If such is the case, the upazila parishad in implementation of the masterplan will carry out planning studies concerning socio-economic and physical changes and make a review of the masterplan at intervals, say every 10 years. In this respect, the masterplan is not rigid, it is flexible in terms of accommodating changes.

In conclusion it is anticipated that the spatial organisation of the masterplan will reflect the culture and heritage, desires and aspirations of the people of Chirirbandar, as the upazila parishad is constituted from the local population.

The masterplan of the upazila shahar is a long term strategy of the government to the year 2000, indicating major activities, trends, provisions, constraints and possibilities

The preparation of this masterplan within the National Physical Planning Project has been instigated by the Urban Development Directorate, Ministry of Works and the Government of the People's Republic of Bangladesh with assistance from the United Nations Development Programme

* Lakh equals 1 million